

Response to HEPAP Subpanel Report

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I represent a typical University-based HEP group:

- philosophy of “mainstream” physics
- physics/hardware/software projects
DZero, ATLAS, PP2PP
- involved in many searches;
 - SUSY, Extra Dimensions, Higgs
- hardware R+D for LC
- software R+D for GRID

OVERALL REACTION

- ➡ Important and timely statement of
 - where we stand
 - how far we have come
 - how much remains to be understood(!)
 - relation of HEP to other fields
 - choices for HEP
 - choices for U.S.

BUT...

- largely “LC-centric”
- *correct* direction – complement/natural extension of Tevatron/LHC...
- are we *ready* to do this?
- relatively small LC community
(many of us very busy with Tevatron/LHC)
- leadership?? (LC Workshop)
- relation to LHC results...natural delays...

Linear Collider in U.S.

- ➡ LC *should* be built in the U.S. !
- ➡ Strongly support beneficial effects
 - beacon to attract young/best scientists
 - focus for revitalization/economic effects
 - U.S. Leadership
- ➡ Natural reciprocation after LHC
- ➡ vs. funding another large effort overseas?
- ➡ Make the arguments for new funding while showing responsibility in current program

The Roadmap

- ☞ We must keep asking if we are pursuing the correct goals
- ☞ Frequent review/updates essential for field
- ☞ We must convey the unity of our approaches
 - the Roadmap helps with this process
- ☞ How can we best get this integrated into long-term government planning?

University based program

- ☞ >80% of the community !
- ☞ Cost effective – major \$\$ contributions!
- ☞ Multiplier effect ~100 groups x contacts with representatives
- ☞ Cuts 2% - 8% !
- ☞ Report suggests many new initiatives, but we are having great difficulty maintaining existing program!
- ☞ Implement the Gilman panel restoration!

Research + Development

- ☞ LC detector R+D in U.S. is at very minimal level
needs immediate/significant boost
 - ☞ Generic R+D *must* always be supported
 - many new ideas with large potential payoffs:
- e.g. applications of nanotechnology at UT Arlington:
- nanotubes for tracker strip/pixel elements
 - new nanocrystalline semiconductors to
replace silicon
- !! Need the resources to explore/transfer
this technology.
- ☞ Strongly support efforts on Grid development

Bottom Line...

☞ Let's use this report to:

📦 Revitalize High Energy/Physical Science

📦 Host the Linear Collider in the U.S.

📦 Restore funding/effectiveness of
University groups

📦 Excite a future generation of scientists

through constructive/assertive dialog with
colleagues/government!